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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,319	07/01/2003	Ken Sumitani	299002056600	4067
25226	7590	07/12/2004	EXAMINER	
MORRISON & FOERSTER LLP			NGUYEN, DANG T	
755 PAGE MILL RD			ART UNIT	
PALO ALTO, CA 94304-1018			PAPER NUMBER	
			2178	

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/612,319	SUMITANI, KEN	
	Examiner	Art Unit	
	Dang T Nguyen	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-7 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 01 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Search history</u> . |

DETAILED ACTION

1. This action is responsive to the following communications: the Application filed on July 01, 2003.
2. Claims 1 - 7 are pending in this case. Claim 1 is independent claim.

Drawings

3. Figures 9, 10, 11 (A-C), 12, and 13 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 - 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Uchida et al. U.S. Patent No. US 6,636,444 B2 - filed Jan. 29, 2002.

Regarding independent claim 1, Uchida et al. discloses a semiconductor memory device, comprising: a memory array comprising a plurality of memory cells (Fig. 5B [32]); a page buffer section (Figs. 1A and 1B [115]) for temporarily storing data to be written into the memory array (Fig. 1B [129] Col. 5 line 27); and a masking section for masking at least a portion of data read from the page buffer section (Figs. 8A and 8B Col. 10 lines 24-25).

Regarding dependent claim 2, Uchida discloses wherein the masking section masks the portion of the data based on a data bus width in the semiconductor memory device (Col. 1 lines 34-36).

Regarding dependent claim 3, Uchida discloses wherein the masking section comprises a comparison section for comparing a value of an address of the memory array with a value of at least one of a beginning address and an end address of the memory array, when the data is read from the page buffer section (Col. 11 lines 56-58); and whether or not the data is masked is determined based on a result of the comparison by the comparison section (Col. 2 lines 64-67).

Regarding dependent claim 4, Uchida discloses wherein the masking section comprises a matching detection section for determining whether or not an address of the memory array is equal to at least one of a beginning address and an end address of the memory array, when the data is read from the page buffer section (Col. 14 lines 40-59).

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Regarding dependent claim 5, Uchida discloses wherein the masking section comprises a counter section for counting the number of pieces of data to be written into the memory array (Fig. 5B [23]); and whether or not the data is masked is determined based on a result of the counting by the counter section (Col. 7 line 57 – Col. 8 line 21).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al., Patent No.: US 6,636,444 B2 – filed Jan. 29, 2002 in view of Applicant Admitted Prior Art (AAPA).

Regarding dependent claim 6, Uchida et al. as applied to claim 1 above disclosed every aspect of applicant's claimed invention except for wherein the masking section comprises a deactivation section for deactivating a portion of the data read from the page buffer section.

AAPA discloses a deactivation section for deactivating a portion of the data read from the page buffer section (AAPA, page 13 line 23 – page 14 line 13).

Uchida and AAPA are common subject matter for holding write data. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention

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was made to incorporated AAPA's writing prohibition into Uchida's masking section for the purpose of preventing the data from being written is required.

Regarding dependent claim 7, Uchida et al. as applied to claim 1 above disclosed every aspect of applicant's claimed invention except for wherein each of the plurality of memory cells is a multi-value memory cell capable of storing at least three values; and the semiconductor memory device comprises a page mode read section for simultaneously reading some of the plurality of memory cells.

AAPA discloses a flash memory has multi-value memory cells in which three or more values can be stored (page 15 lines 1-5); and the flash memory provides a page mode reading function for simultaneously reading some of the plurality of memory cells (page 15 lines 10-20).

Uchida and AAPA are common subject matter for reading/writing data. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporated AAPA's multi-value memory cells into Uchida's memory device for the purpose of speeding up writing to a multi-value memory cell or the like.

Prior art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hotta	Patent No. US 5,751,657	Date of Patent: May 12, 1998
Iida	Patent No. 4,468,755	Date of Patent: Aug. 28, 1984
Furukawa	Pub. No.: US 2003/0137874 A1	Pub. Date: Jul. 24, 2003

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Contact Information

7. Any inquiry concerning this communication from the examiner should be directed to Dang Nguyen, who can be reached by telephone at (703) 305-1673. Normal contact times are M-F, 8-4:30.

Upon an unsuccessful attempt to contact the examiner, the examiner's supervisor, Richard Elms, may be reached at (571) 272-1869.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to: (703) 746-7239 (for formal communications intended for entry)

or:

(703) 746-7239 (for after-final communications)

Hand-delivered responses should be brought to

Crystal Park II, 2121 Crystal Drive

Arlington, VA, Fourth Floor (receptionist).

Dang Nguyen 7/2/2004



Vu A. Le
Primary Examiner